

Date: Mon, 23 May 94 04:30:39 PDT
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>
Errors-To: Ham-Space-Errors@UCSD.Edu
Reply-To: Ham-Space@UCSD.Edu
Precedence: Bulk
Subject: Ham-Space Digest V94 #132
To: Ham-Space

Ham-Space Digest Mon, 23 May 94 Volume 94 : Issue 132

Today's Topics:

 ANS-140 BULLETINS
 DO-17 software
 Element set accuracy / antenna's (2 msgs)
 Slipping Sat Ants
 WANTED: E-mail address for info from amsat.org (2 msgs)

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 22 May 1994 10:52:18 MDT
From: ihnp4.ucsd.edu!library.ucla.edu!psgrain!nntp.cs.ubc.ca!alberta!ve6mgs!
usenet@network.ucsd.edu
Subject: ANS-140 BULLETINS
To: ham-space@ucsd.edu

SB SAT @ AMSAT \$ANS-140.01
AMSAT-NA COMMENTS TO NTIA

HR AMSAT NEWS SERVICE BULLETIN 140.01 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-140.01

AMSAT-NA Sends Comments To the National Telecommunications & Information
Administration (NTIA)

The Radio Amateur Satellite Corporation has responded to proposals con-

tained in a notice from the National Telecommunications and Information Administration (NTIA). That notice, entitled Preliminary Spectrum Reallocation Report, was released in February and was prepared pursuant to Title VI of the Omnibus Budget Reconciliation Act of 1993. In that Act, Congress mandated that the U.S. Government re-allocate to the private sector 200 MHz of spectrum below 5 GHz, 100 MHz of it below 3 GHz. Since Amateur Radio's use of the microwave bands is on a secondary basis to Government applications, mostly military, this proceeding could have a significant impact on our future access to these frequencies.

In its comments filed May 11 by AMSAT-NA VP for Government Liaison Perry Klein (W3PK), AMSAT-NA asked the NTIA for wider amateur and amateur-satellite service bands at 13cm than proposed in its Preliminary Report. It proposed that 2300 to 2310, 2390 to 2400 and 2402 to 2417 MHz be turned over to FCC for allocation to commercial users. In omitting 2400 to 2402 MHz from this re-allocation, NTIA noted amateur satellite use of this band. This would presumably leave 2400 to 2402 and 2417 to 245 MHz available to amateurs. The present 13cm amateur band consists of 2300-2310 and 2390-2450 MHz.

AMSAT-NA proposed a primary amateur/amateur satellite allocation of 2400-2410 MHz plus access to as much of the 2410 to 2450 MHz band as possible on a shared basis. In support of this request, AMSAT-NA cited the likelihood of greatly increased demand for amateur satellite operations in the 13 cm band in coming years, far more than can be accommodated within 2400-2402 MHz; the unsuitability of 2417-2450 MHz for amateur satellite downlinks because of interference from such devices as microwave ovens; and the need to coordinate amateur-satellite allocations internationally so that they are available on a global basis. In addition, AMSAT-NA proposed that a narrow band of 1-2 MHz, somewhere between 2300 and 2400 MHz, be allocated to the amateur service on a primary basis to accommodate the experimental weak-signal tropo and EME work now carried out around 2304 MHz.

AMSAT-NA comments were prepared by a group consisting of Perry Klein (W3PK), Ray Soifer (W2RS), Jan King (W3GEY) and Bill Tynan (W3XO).

[The AMSAT News Service (ANS) would like to thank this group for the material used in this bulletin.]

/EX

SB SAT @ AMSAT \$ANS-140.02
LO-19 & IO-26 OBC'S CRASH

HR AMSAT NEWS SERVICE BULLETIN 140.02 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-140.02

L0-19's & I0-26's On-board Computers Crash After A Single Event Upset (SEU)

It has been reported this week that LUSAT-OSCAR-19's On-Board Computer (OBC) had "crashed" after having experienced what is known in the aerospace industry as a Single Event Upset (SEU). This phenomenon is caused by high energy particles in space "effecting" changes in the "state" inside of memory chips and/or other electronic components. In simple terms, an SEU will change a bit from a "1" to a "0" or visa-versa in Random Access Memory (RAM) chips. All MICROSATs have software specifically desgined to handle this problem. However, this software is not "bullet-proof." The software can only correct one "state" change at a time. If two "state" changes occur simultaneously, there is a good possibility that they will occur in RAM memory locations that will eventually lead to an OBC "crash."

The problem with L0-19 was first noticed on 16-MAY-94 over Argentina when LU1JBR was working it then he noticed suddenly that the satellite simply "disappeared." On the evening of 17-MAY-94, L0-19's ground command station, operated by Norberto Pennini (LU8DYF) was able to successfully reset the OBC. AMSAT-LU ground station LU8DYF requests that all users of L0-19 to PLEASE REFRAIN FROM USING IT FOR SEVERAL WEEKS! The reloading of the software will take several weeks along with extensive tests to be performed to insure all is working properly. AMSAT-LU requests that if anyone was collecting telemetry between 17-MAY-94 at 02:00 UTC until 18-MAY-94 around 02:00 UTC that they please forward it to the following addresses: via packet radio to LU8DYF @ LU8DYF.BA.ARG.SOAM and/or LU8DYF @ ON ANY ACTIVE SATELLITE, or via Internet to: lu8dyf@asarin.org.ar. This will certainly assist in the recovery efforts by helping the AMSAT-LU group understand this crash. All users are asked to please be patient as the AMSAT-LU ground command team reloads the operating system software for L0-19.

Alberto Zagni (I2KBD) also reports that the the same high energy eruption that caused the L0-19's OBC to "crash" has also cause I0-26's OBC to "crash." I2KBD reports that the problem occured about the same time period and feels that this was due to the fact the Sun was spewing out alot of highly charged particles. I2KBD says that it will take several days to get the "kernal" and Integrated Housekeeping Tasks (IHT) software reloaded. He too asks that all I0-26 users to please be patient as they bring I0-26 back "on-line."

Please stay tunned to the AMSAT News Service (ANS) bulletins for further status on the reloading and recovery of L0-19 and I0-26.

[The AMSAT News Service (ANS) would like to thank LU2DTZ, LU8DYF, and I2KBD for the information which went into this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-140.03
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 140.03 FROM AMSAT HQ
SILVER SPRING, MD MAY 21, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-140.03

Weekly OSCAR Status Reports: 21-MAY-94

A0-13: Current Transponder Operating Schedule:
L QST *** A0-13 TRANSPONDER SCHEDULE *** 1994 May 07-Jul 11
Mode-B : MA 0 to MA 170 |
Mode-BS : MA 170 to MA 218 |
Mode-S : MA 218 to MA 220 |<- S beacon only
Mode-S : MA 220 to MA 230 |<- S transponder; B trsp. is OFF
Mode-BS : MA 230 to MA 250 | Alon/Alat 230/-5
Mode-B : MA 250 to MA 256 |
Omnis : MA 250 to MA 120 | Move to attitude 180/0, Jul 11
[G3RUH/DB20S/VK5AGR]

F0-20: The analog mode will be continued indefinitely.
[Kazu Sakamoto (JJ1WTK) qga02014@niftyserve.or.jp]

K0-25: Please note that the K0-25 uplink was switched back to 145.980 MHz
on about 10-May-94. [K6OYY]

A0-16: Working well. [WH6I]

L0-19: DON'T USE L0-19 UNTIL FURTHER NOTICE! [LW2DTZ]

I0-26: I0-26 has sustained a SEU and users are asked to refrain from trying
to use it. [I2KBD]

K0-23: Operating Normally. [WH6I]

I0-26: Operating normally. [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX

Date: 22 May 94 14:54:15 GMT
From: news-mail-gateway@ucsd.edu
Subject: D0-17 software
To: ham-space@ucsd.edu

Hi all,

I am just curious if anyone has the program to decode telemetry from D0-17. If so, where can I get it from?

Thanks in advance,
Jon

* Jon Duffin University of Utah *
* duffin@ee.utah.edu Dept. of Electrical Engineering *
* KB7TJJ *

Date: 22 May 1994 21:24:40 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!usenet.ufl.edu!alpha.ee.ufl.edu!
mikel@network.ucsd.edu
Subject: Element set accuracy / antenna's
To: ham-space@ucsd.edu

Hi all:

I have a couple of quick questions, if someone can point me to a FAQ which covers them, or perhaps just drop an e-mail message. I have been trying to work the MIR space station and two things have come up. First I am running STSPLUS and have obtained several sets of satellite element sets, I have noticed that the different element sets give different! orbit projections!!!! What's up?, are the element sets only valid for a finite amount of time? How often should one get updated lists? Secondly, I'm using a 1/4 wave ground plane antenna with about 25 W from an IC-27A, I can hear MIR on occasion is there anyway to verify that MIR could hear me? It seems to always be busy, when(if) I get the opportunity to connect I'd like to be sure that MIR can hear me. Thanks in advance for any help you can provide.
Mike

Date: 23 May 1994 07:57:43 GMT
From: ihnp4.ucsd.edu!agate!usenet.ins.cwru.edu!cleveland.Freenet.Edu!
dt650@network.ucsd.edu
Subject: Element set accuracy / antenna's
To: ham-space@ucsd.edu

Mir is big, has lots of drag and is in a low orbit. It would have re-entered and burned up years ago if it didn't fire its rockets ever month or three to reboost itself back up into its proper orbit. The reboosting seems to be done with a series of burns spread over days or even weeks. Of course, every time the rockets are fired, the orbit changes, thus invalidating your orbital elements!

Best bet for Mir - get elements weekly from packet or internet.

By the way, according to Jonathan's Space Report, Mir reboosted last week.

Dave, N9LTD

P.S. For a real thrill, run the keps for the various PARTS of Mir - Crystal, Kvant, etc. Notice how, according to the Keps, these objects are up to several minutes apart, despite the fact that they are all bolted together!
###

Date: Sun, 22 May 1994 14:19:44 GMT
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!lll-winken.llnl.gov!noc.near.net!
usenet.elf.com!rpi!psinnntp!arrl.org!zlau@network.ucsd.edu
Subject: Slipping Sat Ants
To: ham-space@ucsd.edu

ICUMMINGS@DELPHI.COM KB1SG (icumming@news.delphi.com) wrote:
: I am sick and tired of climbing my satellite mast to fix my
: satellite antennas that have slipped on my fiberglass boom.
: I have the KLM long crossed yagis (very long booms).
: I have tightened the hell out of the bolts and am always
: concerned about cracking the #*\$%^^^@ fiberglass.
: I am somewhat new to satellite stuff ... have I missed
: some obvious trick (or is everyone swinging around up there
: swearing at their antennas?)

Well, what NC1I/K1FO (ever wonder how they keep all those EME yagi pointing in the same direction?) did was to use custom

clamps machined to match the boom/tubing diameter. The idea is to maximize the effective surface area.

I've found this works pretty well even with clamps made out of sheet aluminum or square aluminum tubing. I use a hole punch to make holes in sheet metal. For the latter I ended up using a file....

This approach doesn't weaken the boom with holes.

--

Zack Lau KH6CP/1 2 way QRP WAS
 8 States on 10 GHz
Internet: zlau@arrl.org 10 grids on 2304 MHz

Date: 22 May 1994 20:04:25 GMT
From: ihnp4.ucsd.edu!swrinde!emory!europa.eng.gtefsd.com!news.umbc.edu!
haven.umd.edu!umd5.umd.edu!w3eax.umd.edu!pschleck@network.ucsd.edu
Subject: WANTED: E-mail address for info from amsat.org
To: ham-space@ucsd.edu

In article <WY1Z.94May22001922@bach.coe.neu.edu>,
Scott Ehrlich <wy1z@bach.coe.neu.edu> wrote:
>I am looking for the contact address to obtain info from amsat.org.
>
>I've tried info@amsat.org and help@amsat.org, but both messages bounced.
>
>Thanks.
>
>Scott
>

As the maintainer of the "Elmers list" for this newsgroup (among others), I too would be interested in this information. I know several people who have AMSAT E-mail addresses, one or two being on the Elmers list (such as Bob Carpenter, W3OTC), but don't have any official customer service contacts for membership information, files, or mailing lists.

If you wish to submit information about AMSAT, or find out more about the Elmers list and how to obtain a current copy of it, please finger pschleck@unomaha.edu or send E-mail to elmers-request@unomaha.edu.

On a related subject, something that the moderator of rec.radio.info (Mark Salyzyn, VE6MGS) and I are very interested in is who is relaying the AMSAT-related bulletins like the Orbital Elements and Space News to the Info-Hams@ucsd.edu gateway. What is currently happening is that their

respective maintainers are submitting them to Mark who cross-posts them to rec.radio.amateur.space and rec.radio.info (which causes them to be relayed to the Ham-Space and Radio-Info mailing lists), then they appear on Info-Hams (rec.radio.amateur.misc). E-mail to the maintainers reveals that they are not the ones doing the duplicate posting, a person or persons unknown within AMSAT is.

It's certainly not our place to dictate how bulletins should be posted, or even who should post them, but if they are going to be posted to several newsgroups, a simultaneous cross-post is most desirable (propagating a single article within news that will appear in most modern newsreaders only once, although it will be duplicated on the mailing lists). Also, if there will be multiple submitters to news of bulletins with packet-radio BID's, they should use the Message-ID encapsulation convention like the following:

SB BID\$NNN @ DISTRIBUTION

becomes:

Message-ID: <bid\$nnn.1994@ampr.org>

In this way any one news site will have only one copy of the bulletin, regardless of how many submitters post it.

Mark is perfectly willing to help anyone manage the complexity in properly formatting their bulletins. This could be as simple as mailing it to a different E-mail address (rec-radio-info@ve6mgs.ampr.ab.ca instead of Info-Hams@ucsd.edu).

While rec.radio.amateur.space (and Ham-Space) is really the most appropriate target for these bulletins (based on their charters agreed to by a vote of the readership at the last newsgroup reorganization), in the interest of cooperation, we would be amenable to simultaneously cross-posting the AMSAT-related bulletins to rec.radio.info, r.r.a.space, *and* r.r.a.misc (as it's still only one article being propagated) if there is still a strong desire to relay these bulletins to their "traditional" mailing list (we realize that some of the conventions and procedures for relaying radio bulletins predate the rec.radio.info newsgroup and not everyone is going to adopt our recommended techniques overnight, if at all).

Mark and I would very much like to hear from individuals within AMSAT who are interested in using the net to publicize their organization and distribute their bulletins in the most invisible and bandwidth-efficient ways possible. An excellent forum for discussing some of these issues with Mark, myself, and about a dozen other experienced radio information maintainers on the Internet is the rec.radio.amateur Working Group mailing

list (rra-wg). To subscribe, send E-mail to rra-wg-request@amdahl.com.

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

Maintainer, Amateur Radio Elmers Resource Directory

Date: 22 May 1994 20:23:31 GMT
From: ihnp4.ucsd.edu!swrinde!gatech!europa.eng.gtefsd.com!news.umbc.edu!
haven.umd.edu!umd5.umd.edu!w3eax.umd.edu!pschleck@network.ucsd.edu
Subject: WANTED: E-mail address for info from amsat.org
To: ham-space@ucsd.edu

In article <2rods9\$2v2@hecate.umd.edu>,
Paul W Schleck KD3FU <elmers-request@unomaha.edu, rra-wg@amdahl.com> wrote:

[...]

>
>Mark and I would very much like to hear from individuals within AMSAT
>who are interested in using the net to publicize their organization and
>distribute their bulletins in the most invisible and bandwidth-efficient
 ^^
>ways possible. An excellent forum for discussing some of these issues

[...]

Whoops! Freudian slip...

Of course I meant to say "most *visible*" :-)

73, Paul W. Schleck, KD3FU

pschleck@unomaha.edu

End of Ham-Space Digest V94 #132
